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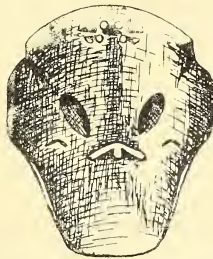
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No. 2.

DESCRIPTIONS OF SEVERAL NEW OR RARE SPECIES OF  
ARANEAE FROM THE TRANSSVAAL AND NEIGHBOURHOOD.

By JOHN HEWITT.

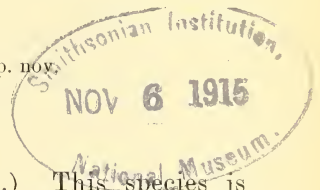
THE material described in this short paper was collected during the past few months by several members of the Transvaal Museum staff, and for the opportunity of examining it I am greatly indebted to Dr. H. G. Breyer, the Director of that institution. Hitherto, the Terricolous spiders of the Transvaal have been almost completely ignored by collectors, yet the fauna is evidently a rich one. The family Migidae is now recorded from the Transvaal for the first time (*Moggridgea breyeri*, sp. nov.), yet no less than fifteen species of this family are known from the Cape Province, and one may safely predict that the genus *Moggridgea* will prove to be well represented in the Transvaal.

Text fig. 1. Carapace of *Moggridgea breyeri* sp. nov.

Family MIGIDAE.

*Moggridgea breyeri*, sp. nov. (Text fig. 1.) This species is related to *M. crudeni*, mihi, from Alicedale, C.P. (Annals, Transvaal Museum, iv, pt. 1) in the character of the fovea and in the spinulation of the coxae: it differs from that species in the ocular characters, and from all species of *Moggridgea* known to me in the presence of a small tubercle on the surface of the carapace on each side, about in the same transverse line as the anterior angle of the fovea.

*Types*.—A series of five female specimens from Gravelotte, near Leydsdorp, collected by Dr. H. G. Breyer and Mr. G. van Dam for the Transvaal Museum. There are no previous records of this genus from the Transvaal.



*Colour*.—Carapace and appendages olivaceous: the lateral portions of the cephalic area and the posterior portion of the carapace pale. Abdomen pale with a purplish tinge above.

*Carapace*.—A little longer than broad, as long as the tibia, metatarsus, and half of the tarsus of the fourth leg. Fovea with an angulated transverse portion and usually a broad but short median prolongation behind: this median posterior portion varies considerably in degree of development and in one specimen is absent altogether. A small tubercle on each side between the fovea and the lateral margin of the carapace. Anterior row of eyes with its front margins forming a moderately procurved line, the laterals rather large, their clear areas quite three or four times, sometimes five or six times, as large as the area of a median eye, the distance between an anterior median and its lateral about equal to the diameter of the former: anterior median a little less than a diameter apart. Posterior row in a very slightly recurved line or practically straight.

*Legs*.—Metatarsus IV with 3, 2, or 4 spiniform setae in the apical tuft inferiorly. Patella III with only a few (about 12) spiniform setae on its anterior side, and with one very strong spinule on the distal edge: patella IV with a number of stout spinules on its anterior surface basally, but in the distal half of the segment the anterior band is composed only of short stiffish setae. Coxae I, II, and III each with a large posterior basal patch of short stout spinules: the patch of each coxa is a little diffuse distally, but the spinules do not extend into the distal half of the segment.

*Pedipalp* with numerous (18-30) spinules on the coxa inferiorly, occupying three or four irregular rows. *Labium* with 11-14 teeth.

*Total length* 13.5 mm.

As a number of new species of *Moggridgea* have been described during the last few years I append a key to the species of the family, and thus the inter-relationships of new and old forms can be seen at a glance.

*Moggridgea microps*, sp. nov.

*Type*.—A single adult female example from Malelane collected by Mr. A. Roberts (24th February, 1915). It was taken from an arboreal nest on the trunk of a large tree. Many abandoned nests were also found on large trees in a gorge at Malelane, but only one tenanted nest was discovered: however, a juvenile spider of this species was taken in a crack on the bark of a tree.

This species was first known to me through an immature example collected by Dr. E. Warren in East Zululand. It is closely related to *M. quercina*, E. Sim. (Ann. Soc. Ent. Belgique, XLVII, p. 22, 1903), being distinguished therefrom mainly in the small size of the anterolateral eyes, and eventually it may prove to be only a variety of that species.

*M. quercina* is the species so common on oak trees in the Cape Peninsula, but is unknown in the eastern parts of the Cape Province: a very closely related form, *M. intermedia* mihi, is known from Knysna however.

*Colour*.—Carapace and appendages chestnut brown: abdomen dark purplish above and at the sides.

*Carapace* longer than broad. Fovea curved, with a distinct but rather superficial narrow median furrow behind. The width of the

ocular area is equal to the length of the first metatarsus. Anterior row of eyes with its front margins practically in a straight line, its hind margins in a very slightly procurved line: lateral eyes small, not quite so large as the medians: distance between median and lateral about equal to  $1\frac{2}{3}$  times the diameter of the former, the medians about  $\frac{2}{3}$  of a diameter apart. Hind margins of posterior row of eyes in a strongly recurved line: medians a little smaller than the laterals.

Distance of anterior lateral eye from anterior margin of carapace about equal to  $1\frac{1}{4}$  times the long diameter of the former.

*Legs.*—Coxae without spinules or stout setae below. Patella IV without spines on any part of its surface and without spinules in its basal portion anteriorly, but with a superoanterior band of spiniform setae. The band along the anterior surface of the patella III is composed of stout spiniform setae, only one row being well developed and there are no spines.

*Pedipalp* with about 45 spinules on the coxa inferiorly, extending the whole length of the segment. *Labium* with 23 teeth. *Measurements.*—Total length 18 mm., length of carapace 7, breadth of carapace 6.2

*Key to the Species of South African Migidæ based on the characters of Adult Females.*

- A.—Metatarsus IV without apical infero-posterior tuft of spiniform setae: femur II armed only with fine hairs inferiorly: patellae I and II without an oblique patch of peculiar stiff hairs arranged in one or several rows inferiorly.  
(Eastern Cape Province to Natal.) \**Poecilomigas abrahami*, O. P. Camb.
- B.—Metatarsus IV with an apical infero-posterior tuft of 3-5 spiniform setae regularly arranged in a transverse row: femur II with 1-2 rows of stout spiniform setae below: patellae I and II with an oblique patch of peculiar stiff hairs arranged in one or several rows inferiorly. †*Moggridgea*, O. P. Camb.

(a) *Coru* III without a basal patch of spinules inferiorly, sometimes, however, with a group of fairly short setae.

1. Anterior of eyes (seen from above) with its front margin forming a straight or even very slightly recurved line, the laterals comparatively small, their area only about twice that of the posterior laterals. (Cape Peninsula.)

*M. quercina*, E. Sim.

\* The position of the four apparent species described by the Rev. O. P. Cambridge from the Cape Peninsula (Annals South African Museum, III, p. 144) under the generic name of *Caedmon* is not known to me. The genotype of *Caedmon* is *Poecilomigas abrahami*, but Mr. Cambridge distinguishes it from *Moggridgea* only in the arrangement of the eyes: it is not clear therefore whether his Cape Peninsula species are referable to *Poecilomigas* or to *Moggridgea* as now distinguished. Three of those species are based on single adult male specimens: the species *C. dubia*, based on a female, has ocular characters distinct from those of *Poecilomigas abrahami* and may perhaps prove to belong to *Moggridgea*.

The Durban species *Moggridgea stauntoni* Poc. (= *P. pulchripes* Sim) is not specifically distinct from *Poecilomigas abrahami* O.P. Cambr.

† Besides the South African species only two others are known, viz., *M. occidua* E. Sim from Ile Principe, off the west coast of Africa, and *M. whitei* Poc., from the Nyika plateau.

2. Like *M. quercina* but anterior row of eyes with its front margin forming a procurved line. (Knysna.)  
*M. intermedia*, Hewitt.
3. The lateral eyes of the anterior row not quite so large as the medians. (Malelane.)  
*M. microps*, sp. nov.
4. Anterior row of eyes with its front margin forming a strongly procurved line, the laterals being very large and convex, their area many times larger than that of the posterior lateral eyes.
- (a<sup>1</sup>) *Coxa II* with a distinct posterobasal group of shorter and more densely crowded (often spiniform) setae inferiorly.
5. Ocular area narrower, its width less than the length of metatarsus I. (Hanover, De Aar, Rooispruit, near Rosmead.)  
*M. seticoxa*, Purc.
6. Ocular area broader, its width greater than the length of metatarsus I: width of carapace almost twice that of the ocular area. (Uitenhage Division, Alicedale.)  
\* *M. coegensis*, Purc.
7. Similar to *coegensis* but width of carapace not more than one and threequarter times that of the ocular area. (Ashton, Robertson Division.)  
*M. nigra*, Purc.
- (a<sup>2</sup>) *Coxa muticous inferiorly*.
8. Posteromedian and posterolateral eyes separated by a distance equal to twice the diameter of the latter; anteromedians much nearer together than to the anterolaterals. (Matjiesfontein, Worcester.)  
*M. peringueyi*, E. Sim.
9. Posteromedian and posterolateral eyes separated by a distance equal to about half the diameter of the latter; distance between anteromedian eyes very slightly greater than that between anteromedians and anterolaterals. (Kraikluft, G.S.W.A.)  
*M. pallida*, Hewitt.
- (b) *Coxa III*, only with a basal patch of spinules inferiorly.
10. Posterior median eyes narrow elongate, the anterior laterals very large and convex. (Clanwilliam or Van Rhynsdorp Division.)  
*M. leipoldti*, Purc.
11. Posterior median eyes broadly oval or nearly rounded, the anterior laterals moderately large. (Cape Peninsula.)  
*M. terricola*, E. Sim.
- (c) *Coxae II and III* with a basal patch of spinules inferiorly. *Coxa I* without spinules, but sometimes with a few short spinuliform setae.
- (c<sup>1</sup>) *Fovea* without distinct backward prolongation in the midline.
12. Anterior median eyes less than a diameter apart and nearly twice a diameter or more distant from the anterior laterals which are very large. Patella III with a broad anterior band of spines and setiform spines above. (Montagu.)  
*M. mordax*, Purc.

\* This seems to be a variety of *seticoxa*.



13. Anterior median eyes about a diameter apart and three or more diameters distant from the anterior laterals which are of moderate size. The patch on Coxa III includes 12-16 spinules. (Alicedale.) *M. rupicola*, Hewitt.
14. Anterior median eyes about half a diameter apart, and about two diameters distant from the anterolaterals, which are small being hardly twice the area of the anteromedians. Patella III with several rows of stout spiniform setae anteriorly, and with 1-3 short spines on the distal edge. Patch on Coxa III including about 30 spinules. (Grahamstown.) *M. rupicoloides*, Hewitt.
15. Anterior median eyes about a diameter apart and about two diameters or a trifle more distant from the anterior laterals, which are of moderate size, their area 3 or 4 times that of an anterior median. Patch on Coxa III including about 7 or 8 spinules. Patella III with a band of 8 or 9 spines along its anterior surface. (From 50 miles south of Umtali.) This species differs from the type of *M. whitei*, Poc., from the Nyika plateau as follows: anterior lateral eyes in *whitei* distant about 2 diameters from anterior margin of carapace or very nearly so, in *pymi* rather less than a diameter distant from that margin. In *whitei* there are only about 10 spinules in the cluster on Coxa III, that of II including about 14 spinules: the labium has many strong spinules.

*M. pyimi*, Hewitt.

(c<sup>2</sup>) Fovea with a very distinct broad but short backward prolongation in the midline.

16. Anterior median eyes slightly more than half a diameter apart and distant about  $1\frac{1}{2}$  diameters from the anterior laterals, which are small, being about twice the area of a median. The patches of spinules on Coxae II and III are large. Patella III with a broad anterior band of spines and short spiniform setae. (Alicedale.) *M. terrestris*, Hewitt.

(d) Coxae I, II, and III each with a basal patch of spinules inferiorly.

(d<sup>1</sup>) Fovea without a backward prolongation in the midline.

17. Patch of spinules on Coxa III including only about 5-10 spinules. (Grahamstown, Uitenhage, Somerset East.)

*M. dyeri*, O. P. Camb.

(d<sup>2</sup>) Fovea with a very distinct broad but short backward prolongation in the midline (sometimes wanting, however, in *breyeri*.)

18. Carapace with a distinct protuberance on each side in a line with the anterior bend of the fovea and a little near to the side of the carapace than to the fovea. Distance between anteromedian and anterolateral eyes about equal to diameter of former, the laterals very large. (Gravelotte, near Leydsdorp.) *M. breyeri*, sp. nov.

19. Carapace without a protuberance on each side lateral to the fovea. Distance between anteromedian and anterolateral eyes about equal to three times the diameter of the former, the laterals comparatively small. (Alicedale.)

*M. crudeni*, Hewitt.

## Family CTENIZIDAE.

*Galeosoma Pallidum*, sp. nov.

*Types*.—Three adult female examples in the collection of the Transvaal Museum, taken at Saltpan, Pretoria District, by the members of the Transvaal Museum Expedition, 6 X, 1914. The species is closely related to *G. schreineri*, mihi, from De Aar (Records Albany Museum, Vol LI, p. 421), differing therefrom chiefly in the form of the shield.

*Colour*.—Carapace palps and legs pale, yellowish; chelicerae brown; abdominal shield black.

*Carapace* subequal in length to the patella, tibia and metatarsus of the first leg. Ocular area as wide as long. Hind margins of posterior row of eyes in a straight or slightly procurved line: distance between the posterior medians about  $1\frac{1}{2}$  times the distance between posterior median and posterior lateral (in *schreineri* the posterior laterals are almost as far from the posterior median as the latter are from each other).

*Legs*.—Tibia II with 5 or 6 spines on its anterior surface, III with 5-9 spines on its posterior surface.

*Abdomen*.—In its hinder portion the dorsal shield presents the appearance of a thick disk with sharply defined flat upper and fairly deep marginal inclined at right angles to each other, the junction between the two being a slightly upturned ridge: in its anterior half, however, the upper and marginal surfaces become more and more obtusely inclined to each other and their junction ill-defined, being marked by no ridge (in *schreineri* there is a continuous ridge quite devoid of pits all round): moreover, the marginal surface anteriorly is a curved one and is considerably extended, much more so than in *schreineri*. The flat upper surface is approximately circular in outline. Dorsally the soft skin immediately anterior to the shield is finely hairy, whereas in *schreineri* it presents 4 or 5 fairly regularly arranged transverse rows of closely approximated setae: these rows are visible to the naked eye as fine striae: in *schreineri* this arrangement is continued downwards along the lateral surface of the abdomen close to the shield and ends at the elongated ventral sigillum, but on the lateral surface the lines of setae are much more numerous and obliquely arranged, whilst the setae being much longer than those on the dorsal surface impart to the area a bearded appearance: nothing of this kind is found in *pallidum*.

The first described species of this genus, *G. scutatatum*, Purcell, taken at Krugersdorp, differs from *pallidum* as follows: posteromedian eyes nearer to each other than to the posterolaterals, the shield is strongly convex and nowhere flattened, being merely the hardened integument covering a portion of an abdomen of normal rounded proportions, but posteriorly it presents a slightly upturned thin edge, whilst elsewhere, except to a slight extent anteriorly, there is no indication of a marginal surface as distinct from an upper surface: lines of setae immediately adjacent to the shield on the upper and lateral surfaces are present, but not so strongly developed as in *schreineri*.

*Measurements*.—Total length 21 mm., length of carapace 7.4, breadth of same 5.8, greatest of shield 11 (measured from posterior

upper edge to anterior lower edge), greatest breadth of shield 8 (measured between lower edge from side to side), breadth across upper surface of shield 7.5.

*Galeosoma vandami*, sp. nov.

*Types*.—Two female examples from Griffin Mine, Leydsdorp, collected by Mr. G. van Dam (14/1/1915), a series of six smaller specimens were also taken at Gravelotte, near Leydsdorp, by the same collector (28/1/1915).

*Abdominal shield*.—The upper surface is almost regularly oval in outline: it is rather lightly convex behind, more strongly so in front, and is marked off throughout from the marginal surface, being separated therefrom by a distinct ridge which in the posterior third at least is sharp and slightly upturned, but in the anterior half is less prominent, and immediately in front may be practically obsolete, although even there the upper and marginal surfaces are angularly inclined to each other. The marginal surface anteriorly is not deeper than at the sides, sometimes, indeed, being less deep. The upper surface carries only a few long hairs, but they are numerous on the marginal surface. Dorsally, the soft skin immediately anterior to the shield presents several transverse rows of closely approximated short setae, and ventrolaterally in the immediate neighbourhood of the shield there are numerous obliquely arranged lines of setae, which serve to mark out that area from the rest of the ventral surface in naked eye view on account of its darker colour. These setae are, however, finer than those found in *schreineri*.

*Ocular area*.—Distance between the two posterior median eyes about  $1\frac{1}{2}$  times the distance between a posterior median and posterior lateral. The frontal eyes are variable in size and the cleft between them may be shallow or deep.

*Measurements of largest specimens*—

|   |          |
|---|----------|
| Total length ... ..                             | 18.5 mm. |
| Length of carapace ... ..                       | 7 mm.    |
| Breadth of carapace ... ..                      | 5 mm.    |
| Length of shield measured along upper surface   | 9 mm.    |
| Breadth of shield measured across upper surface | 7.5 mm.  |

The Gravelotte specimens are not quite identical with the types from Griffin Mine: they are smaller, and the depth of the shield is on the average slightly less relatively to its length.

*Galeosoma coronatum*, sp. nov.

*Type*.—A single specimen from Kroonstad presented to the Albany Museum by Miss D. Chennells (Feb. 1915).

*Abdominal shield*.—The upper surface does not present any flattened portion, but is strongly convex throughout and passes gradually without interruption into the sides, except in the posterior half, where a distinct but not prominent ridge marks the boundary between upper and lateral surfaces. The shield is beset with long hairs almost throughout its surface. Lines of setae immediately adjacent to the shield on the upper and lateral surface of the abdomen are present, somewhat as in *schreineri*.

*Ocular area*.—Posterior row of eyes subequally spaced. Quadrangle formed by frontal and anterior, median eyes broader in front, the frontals being much larger than the anteromedians and about half a diameter apart.



*Measurements.*—

|   |      |     |
|---|------|-----|
| Total length ... ..   | 17   | mm. |
| Length of carapace ... ..   | 7.3  | mm. |
| Breadth of carapace ... ..  | 5.5  | mm. |
| Greatest length of shield (measured between<br>anterior and posterior lower edges) ... .. | 9.8  | mm. |
| Greatest breadth of shield ... ..   | 7.8  | mm. |
| Depth of shield measured posteromesially ...  | 1.75 | mm. |

In the form of the shield this species resembles *G. scutatum*, Purc., from Krugersdorp, rather than any of the other known species: it differs therefrom in the occurrence of more definite lateral surfaces in the posterior third of the shield, in the hairiness of the shield and in the arrangement of the eyes of the posterior row.

*Heligmomerus Caffer*, Purcell. (Novitates Zoologicae X, p. 305, 1903).

Only two species of the genus *Heligmomerus* are recorded from South Africa, viz.: *H. deserti*, Pocock, described from the Kalahari (Ann. Mag. Nat. Hist. 7, 7, 286) and *H. caffer*, Purcell, from Shilohane. I believe that both are founded on juvenile examples, and although the two species will probably prove to be distinct it cannot be said that the distinguishing characters are yet known, for the ocular characters, on which specific distinctions are mainly based, differ greatly in juvenile and adult examples of the same species. The Transvaal Museum has three fine female examples, including two quite adult, from Moorddrift, Waterberg District (coll. C. J. Swierstra and A. Roberts), which I suppose should be referred to *caffer*, but are possibly a distinct species. The striking characters of these specimens as distinct from an *Idiops* are: the great breadth of the fovea and the shortness of the ocular area. The frontal eyes are about a diameter or a trifle more apart, comparatively small, being not much larger than the other eyes: anteromedians 1-1 $\frac{1}{4}$  diameters apart: the quadrangle formed by the frontal and anterior median eyes decidedly longer than broad, the anterior width only a little greater than, or subequal to, the posterior width: distance between the proteromedian eyes about 1 $\frac{1}{2}$  times their distance from the posterolaterals. The ventral surfaces of both pairs of spinners is beset with scattered small spines, whereas in *Idiops* such spines are chiefly formed on the penultimate segment of the superior spinners, and the inferior spinners are either devoid of spines or carry only 1 or 2.

|                            |      |     |
|----------------------------|------|-----|
| Total length ... ..        | 33   | mm. |
| Length of carapace ... ..  | 12   | mm. |
| Breadth of carapace ... .. | 10.7 | mm. |

*Idiops pretoriae* (Poc.) (Acanthodon p., Pocock in Ann. Mag. Nat. History, 7, 1, p. 319).

The Transvaal Museum has a very fine male example found in a trapdoor nest at Saltpan, Pretoria District (6/10/1914). It differs from the type only in a few minor points. The dentition of the chelicerae is 6.5, that of the type being 7.4. The bank of spinules on the anterior surface of patella IV stretches the whole length of the segment on the side: in the type it stretches 5/6ths of the length of the segment and includes about 30 short spines. Patella III in both specimens has 13 spinules on its anterior surface, and in addition 4 on the anterior distal edge. Mr. Pocock says:—"All the tarsi scopulate



below, the scopula increasing in thickness from the first to the fourth": in the Saltpan specimen, tarsus I has numerous short and fairly stout spines inferiorly, scopular hairs being limited to a narrow lateral patch on each side in the distal third of the segment, II without distinct spines below, but with a narrow mesial strip of spiniform setae completely dividing the scopula, which is present in the distal 2 to 3/5ths of the length of the segment, III and IV with large undivided scopulae extending almost to the base. The area formed by the frontal and anterior median eyes is much broader behind than in front: frontals very slightly more than  $\frac{1}{4}$  of a diameter apart.

*Idiops Gunningi*, Hewitt, var. nov. *elongatus*. (Records Albany Museum II, p. 417).

This new variety is founded on 6 specimens, of which 4 are adult females, from Moorddrift, Waterberg District (C. J. Swierstra and A. Roberts). It differs from the typical form of *Gunningi*, as known to me from the single type specimen, in the following respects: Carapace a little longer than the tibia and metatarsus of the fourth leg (a little shorter than the tibia and metatarsus of the fourth leg in the type): ocular area narrower, its width being very slightly less than the length of tibia II measured along the dorsal midline (very slightly exceeding the length of tibia II in the type: the spines on the anterior side of patella IV more numerous, those in the distal half arranged in 3 or 4 rows (arranged in a double row in the type). Other characters are as follows:—Frontal eyes about  $\frac{1}{3}$  of a diameter apart, but in one specimen  $\frac{2}{3}$  of a diameter apart: quadrangle formed by the frontal and anterior median eyes broader behind and quite twice as long as the posterior width: quadrangle formed by the four median eyes either a trifle broader in front or subequal before and behind, or a trifle broader behind: distance between post median and post lateral eyes about  $1\frac{1}{4}$  to  $1\frac{1}{2}$  times the distance between the post medians: posterior margins of posterior row of eyes about in the same transverse line. Anterior surface of patella IV spined over its whole length. Tibia IV usually without spines on its anterior surface, excluding those inferiorly situated, but one specimen has 2 spines on one side and 1 on the other, and another specimen has 1 spine on one side only. Tibia II with 11-13 spines on its anterior side, but only 8 in a specimen which is apparently not quite mature.

*Measurements.*—

|                           |      |     |
|---------------------------|------|-----|
| Total length ... ..       | 33   | mm. |
| Length of carapace ... .. | 13.9 | mm. |
| Breadth of carapace... .. | 11   | mm. |

*Colour.*—Carapace pale brown, appendages reddish brown.

The following species of *Idiops*\* have been described from South Africa:—

- I. Pretoriae* (Poc.), said to have come from Pretoria (A.M.N.H. 7, 1, p. 319).—Male. The supposed female of this species, found in Pretoria, was described by me (Ann. Transvaal Museum II, p. 74), but subsequently females belonging

\* The first species recorded from South Africa under this generic name is *I. thorelli*, O.P. Carb. (P.Z.S. 1870 p. 156). In P.Z.S. 1897, p. 731, Mr. Pocock refers this species to the genus *Acanthodon*, but subsequently (A.M.N.H. VII. 1, p. 320) he includes with it in that genus a species, which we now refer to as *Idiops*, and evidently regarded the two genera as synonymous. I have examined the type of *thorelli* and find it to be a true *Acanthodon*.

to a second series of Idiops were taken in the Pretoria neighbourhood at Zwartspruit and described by me under the name of *I. gunningi* (Records Albany Museum II, p. 417). It is, however, uncertain which, if either, of these two species is co-specific with *pretoriae*. The recent discovery of an undoubted male of *pretoriae* at Saltpan enables us to fix a precise locality for the species.

- I. Fryi* (Purc.), from Johannesburg (Ann. S. Af. Mus. III, p. 91).—Female.
- I. versicolor* (Purc.), from Umtali (Ann. S. Af. Mus. III, p. 90).—Female. An important character of the species not mentioned in the description, but found in Dr. Purcell's key (Trans. S. A. Phil. Soc. XV, p. 118), is the presence of short spinules on the anterior surface of the coxae of the first two pairs of legs.
- I. pungwensis*, Purc., from Pungwe Riv. (Trans. S. A. Phil. Soc. XV, p. 116).—Male.
- I. pallidipes*, Purc., from S. Herereland, and *I. striatipes*, Purc., from Sekgoma, in the Kalahari (Jena. Denkschrift XIII, pp. 206-207), are based on specimens which are in all probability very immature, and the characters of the species will not be fully known until adult material is obtained.
- I. pulcher*, Hewitt from Tsessebe, Tati (Records Albany Museum III, p. 23).—Female.
- I. arnoldi*, Hewitt, from Bulawayo (Rec. Alb. Mus. III, p. 21).—Male.
- I. astutus*, Hewitt, from Bulawayo (Ann. Natal Mus. III, pt. 2).—Male.
- I. gunningi*, Hewitt, *vide supra*.
- I. gerhardti*, Hewitt, from Doornkop, near Belfast (Rec. Alb. Mus. II, p. 420).—Female. The type is perhaps not quite mature. Its most striking character is the longitudinal elongation of the posterior eyes.
- I. parvus*, Hewitt, from Holfontein, O.F.S. (Rec. Alb. Mus. III, pt. 2).—Female.
- I. castaneus*, Hewitt, from Newington (Rec. Alb. Mus. II, p. 420), is based on a young example and should not have been described.

*Acanthodon transvaalensis* (Mihl) var. nov. *paucispinulosus*.

*Types*.—Two adult female examples and several juveniles from Gravelotte, near Leydsdorp, collected for the Transvaal Museum by Mr. G. van Dam. This form is at once distinguished from the type of the species (Records Albany Museum II, p. 412) in the complete absence of spinules on the coxa of the second leg: the inferior surface of that coxa is largely covered by stiffish setae. The coxa of the third leg has a patch of stout spinules extending along the whole length of the segment posteroventrally: these spinules are stouter than, but not so numerous as, those in the type of the species. There are also minor differences in the ocular arrangement: the cleft between the frontal eyes is decidedly deeper in this new variety than in the types, and the distance between the posterior median eyes is about  $1\frac{3}{4}$  times that between the posterior median and posterior lateral eyes, whereas in the type the proportion is scarcely as much as  $1\frac{1}{2}$  times. Viewed

from in front the distance between the frontal eyes is  $\frac{2}{3}$  to  $\frac{3}{5}$  of the diameter of an eye.

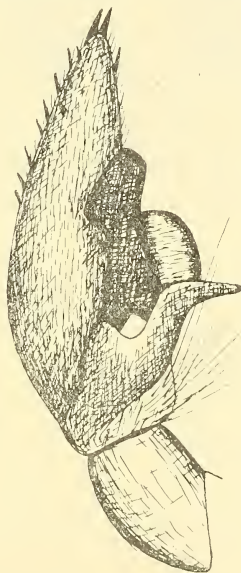
As in the types there are 3 pairs of sternal sigilla. The dentition is noteworthy as affording what may fairly be described as an intermediate condition between the dentitions of typical *Acanthodon* and of *Idiops*: the teeth of the outer row are much larger than those of a typical *Acanthodon*, but the row does not extend the whole length of the fang groove.

Total length ... .. 15.5 mm.

Family ZODARIIDAE.



Text fig. 2a. *Capheris transvaalicus* sp. nov. Adult male seen from above.



Text fig. 2b. Distal portion male palp of *Capheris transvaalicus* sp. nov.

*Capheris Transvaalicus* sp. nov. (Text fig. 2 a-b).

*Type*.—A single adult male example from Moorddrift, Waterberg District (C. J. Swierstra and XA Roberts), in the collection of the Transvaal Museum. Only two species of this genus have been hitherto described, viz.: *C. Crassimana* (E. Sim.) (Ann. Soc. Ent. France, 1887, p. 371), from the *Kalahari*, and *C. haematilis*, E. Sim. (Jenaische Denkschr. XVI, p. 181), from Hereroland, and both are stated to be



founded on immature specimens. The species now described differs from either of the above in the granulation of the Carapace and in the ornamentation of the upper surface of the abdomen.

*Carapace* closely and rather coarsely granulated throughout. Posterior row of eyes slightly recurved, the distance between posterior median and posterior lateral scarcely  $1\frac{1}{2}$  times the long diameter of the latter. The surface blackish, sparsely provided throughout with rather short white hairs.

*Abdomen* blackish, ornamented above with a golden band shaped like an elongated ellipse, which posteriorly is acutely pointed (see fig.). The yellow band is made up of short, stout, fleshy looking adpressed hairs, and the black areas on the upper surface are also covered with thick hairs, though these are not quite so thick as the yellow hairs: on the ventral surface all the hairs are long and slender.

*Sternum* brown, the surface clothed with long, slender dark hairs, amongst which are a few white ones. The surface is roughened owing to the presence of the numerous raised hair pits.

*Legs*.—First and fourth subequal, third shortest. Tarsi slender, the unpaired claw obsolete, though the protuberance, relating to this claw, is large and well developed. Tarsi I and II without spines or spinules, III and IV with spines laterally. Tarsi I and II rather strongly scopulate. Distal  $\frac{2}{5}$ ths of metatarsus I also scopulate, but at the distal end of metatarsus II, and to a less extent also of III and IV, there is a dense tuft of long hairs. The appendages are all dark brown, the chelicerae, palps, femora of legs and metatarsi III and IV being sparsely clothed with white hairs.

*Palp* short and stout. External apophysis of tibia projects outwards and is strongly bent distally: viewed from the side its lower margin has a sigmoid curve. Tarsus armed with a double row of short but strong spines along its inner margin, and several along the external margin distally: the apex is forked into two strong spiniform processes.

*Total length* 9.5 mm.

The presence of scopulae and the absence of spines or spinules on the anterior tarsi are noteworthy characters, as in the allied genus *Cydrela*, the front tarsi are spined but not scopulate.

EXPLANATION OF PLATE XV.

*Galeosoma coronatum*, sp. nov., from Kroonstad.

Fig. 1. Dorsal view, somewhat enlarged. ♀.

*Galeosoma pallidum*, sp. nov., from Saltpan.

Fig. 2. Dorsal view, somewhat enlarged. ♀.

Fig. 3. Dorsal view, about natural size, showing the great depth of the marginal surface of the shield anteriorly. ♀.

Fig. 4. Ventral view, about natural size. ♀.

*Galeosoma schreineri*, Hewitt, from De Aar.

Fig. 5. Ventral view, about natural size. ♀.

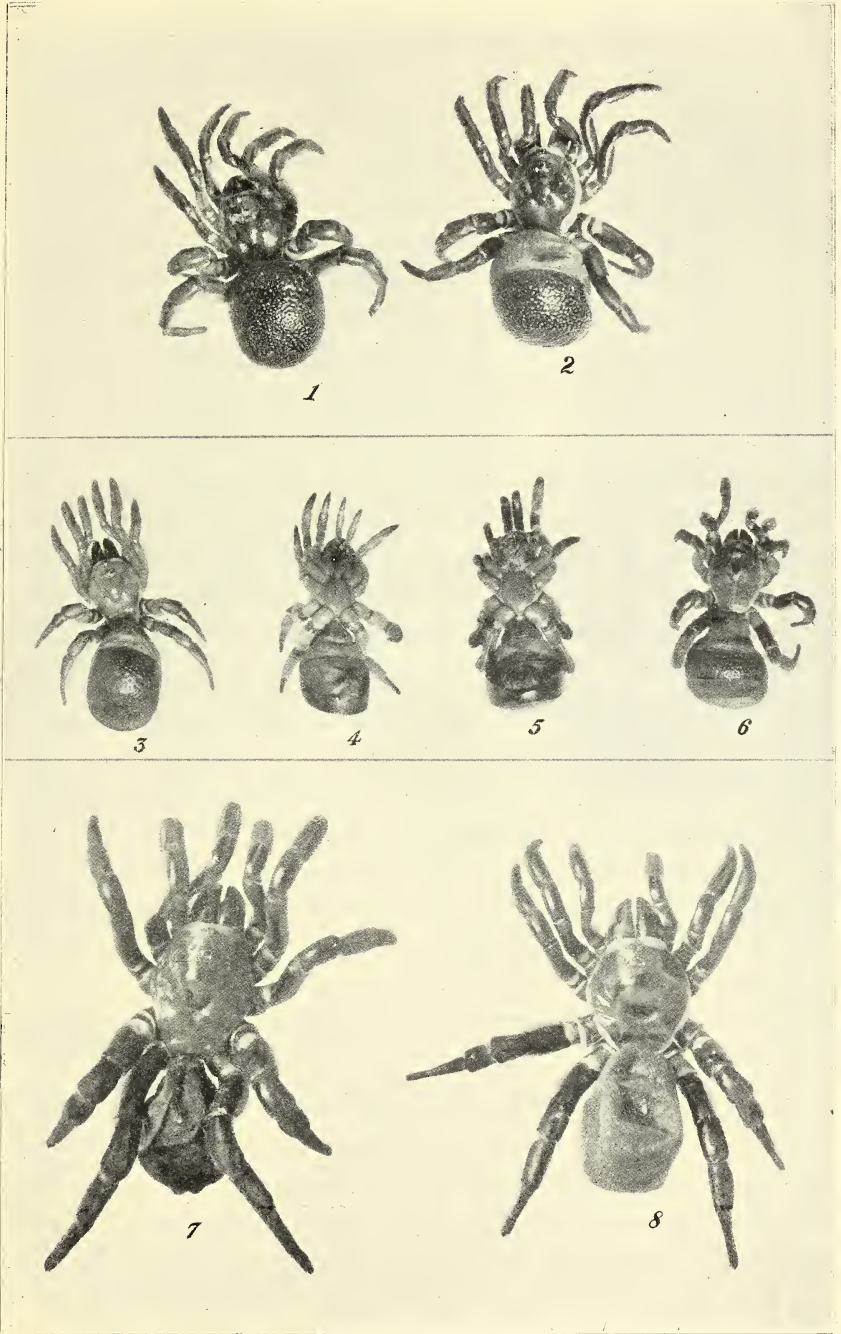
Fig. 6. Dorsal view, about natural size. ♀.

*Idrops gunningi*, Hewitt, var. nov., *elongatus*, from Moorddrift.

Fig. 7. Dorsal view, about natural size. ♀.

*Heligmomerus caffer*, Purcell, ? sp., from Moorddrift.

Fig. 8. Dorsal view, about natural size. ♀.



Idiopine trap-door spiders.